10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# CYP24A1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21361b

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | Q07973 |
| **Reactivity** | Human, Rat |
| **Host** | Rabbit |
| **Clonality** | polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB51760 |
| **Calculated MW** | 58875 |

## Additional Information

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| **Gene ID** | 1591 |
| **Other Names** | 25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial, 24-OHase, Vitamin D(3) 24-hydroxylase, Cytochrome P450 24A1, Cytochrome P450-CC24, CYP24A1, CYP24 |
| **Target/Specificity** | This CYP24A1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 480-514 amino acids from the C-terminal region of human CYP24A1. |
| **Dilution** | WB~~1:1000 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | CYP24A1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | CYP24A1 ( HGNC:2602) |
| **Synonyms** | CYP24 |
| **Function** | A cytochrome P450 monooxygenase with a key role in vitamin D catabolism and calcium homeostasis. Via C24- and C23-oxidation pathways, catalyzes the |

inactivation of both the vitamin D precursor calcidiol (25-hydroxyvitamin D(3)) and the active hormone calcitriol (1-alpha,25-dihydroxyvitamin D(3)) (PubMed:11012668, PubMed:15574355, PubMed:16617161, PubMed:24893882, PubMed:29461981, PubMed:8679605). With initial hydroxylation at C-24 (via C24-oxidation pathway), performs a sequential 6-step oxidation of calcitriol leading to the formation of the biliary metabolite calcitroic acid (PubMed:15574355, PubMed:24893882). With initial hydroxylation at C-23 (via C23-oxidation pathway), catalyzes sequential oxidation of calcidiol leading to the formation of 25(OH)D3-26,23-lactone as end product (PubMed:11012668, PubMed:8679605). Preferentially hydroxylates at C-25 other vitamin D active metabolites, such as CYP11A1-derived secosteroids 20S- hydroxycholecalciferol and 20S,23-dihydroxycholecalciferol (PubMed:25727742). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via FDXR/adrenodoxin reductase and FDX1/adrenodoxin (PubMed:8679605).

**Cellular Location** Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

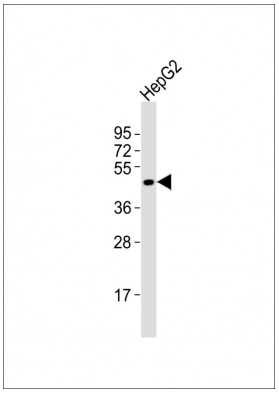
## Background

Has a role in maintaining calcium homeostasis. Catalyzes the NADPH-dependent 24-hydroxylation of calcidiol (25- hydroxyvitamin D(3)) and calcitriol (1-alpha,25-dihydroxyvitamin D(3)). The enzyme can perform up to 6 rounds of hydroxylation of calcitriol leading to calcitroic acid. It also shows 23-hydroxylating activity leading to 1-alpha,25-dihydroxyvitamin D(3)-26,23-lactone as end product.

## References

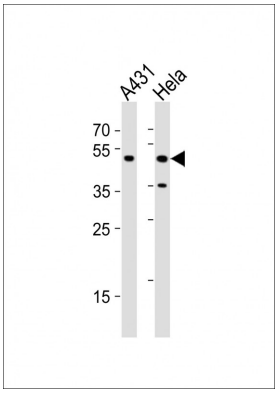

Chen K.-S.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:4543-4547(1993).
Ren S.,et al.J. Biol. Chem. 280:20604-20611(2005).
Deloukas P.,et al.Nature 414:865-871(2001).
Chen K.-S.,et al.Biochim. Biophys. Acta 1263:1-9(1995).
Labuda M.,et al.J. Bone Miner. Res. 8:1397-1406(1993).


## Images




Anti-CYP24A1 Antibody (C-term)at 1:2000 dilution + HepG2 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 59 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes : Anti-CYP24A1 Antibody (C-term) at 1:1000 dilution Lane 1: A431 whole cell lysates Lane 2: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 59 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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